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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,380	04/25/2001	Bernard Andre	BREV 13186	7186

7590 02/22/2005

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EXAMINER

DICUS, TAMRA

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/830,380

Applicant(s)

ANDRE ET AL.

Examiner

Tamra L. Dicus

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14-23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0486 475 A2 to Ando et al. as previously set forth in the Office Action mailed 09/07/04.
3. Regarding instant claims 15 and 20, the transitional phrase “consisting essentially of” limits the scope of a claim to the specified materials or steps “and those that do not materially affect the basic and novel characteristic(s)” of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52. Ando at page 3, lines 1-5 and lines 24-27, and page 16, lines 26-30, explicitly teaches one or more thin films composed essentially of hafnium oxide or other material oxides (another material of instant claim 22) of Zr or Ta in a thin film having excellent scratch resistance. Figure 7 teaches layers of another material also (instant claim 22) where the oxides of Hf or Zr, Ta, Sn, In, Ti (layer 58) is disposed alternate near plastic interlayer 53, glass sheet 51 and 52 are the bonding surfaces. Either plastic, glass, Zr, Ta, are suitable material constituting “another material” of instant claim 22. See page 16, lines 15-20 where the hafnium oxide material is disposed between one or more layers of transparent conductive film and plastic interlayer (instant claim 22).

Response to Arguments

Applicant's arguments filed 11-19-04 have been fully considered but they are not persuasive. Applicant's contentions are toward arguing that Ando teaches in the very same layer amorphous hafnium oxide mixed with B or Si, and therefore the layer or stacks of layers as recited are considered a mixture. Applicant argues Ando does not suggest the novelty of the instant invention because of Applicant's new limitation to "consisting essentially of". Regarding Applicant's arguments of prior art that Ando does not teach or suggest the instant invention based on the inclusion of B or Si, such arguments are not persuasive because the prior art provides no indication the material would not function any different from the claimed invention. The transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52. Applicant has not clearly shown for the record that the additional components would materially affect the claimed invention.

"A consisting essentially of' claim occupies a middle ground between closed claims that are written in a consisting of' format and fully open claims that are drafted in a comprising' format." *PPG Industries v. Guardian Industries*, 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-54 (Fed. Cir.1998). See also *Atlas Powder v. E.I. duPont de Nemours & Co.*, 750 F.2d 1569. Absent a clear indication in the specification or claims of what the basic and novel characteristics actually are (e.g. absence of the inclusion of B or Si), "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., *PPG*, 156 F.3d at 1355. Thus because the claims are construed as comprising, B or Si would be included as the prior art teaches.

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Applicant argues that Ando does not teach a stack of layers with hafnium oxide forming one layer and another material forming another one. The prior art includes amorphous hafnium oxide in a layer or stacks of layers, which is the same as Applicant claims. See the Abstract and page 15, lines 5-9, 15-20, and 30-32. Applicant points to layer 13, which is a mixed oxide and other layers in Figures 4, 5, and 6. However, it appears Applicant may not have considered the explicit teaching of Ando in the Abstract including amorphous hafnium oxide (oxide containing Hf). See also page 3, lines 1-5 and lines 24-27, and page 16, lines 26-30. On page 3, Ando explicitly teaches one or more thin films composed essentially of hafnium oxide in a thin film having excellent scratch resistance. On page 15, lines 5-31, Ando explicitly teaches the amorphous oxide film may be substituted for the transparent oxide in direct contact with silver in an alternate, interposing fashion.

Applicant argues that an interlayer is shown and does not include amorphous hafnium oxide. Again, see page 3, lines 1-5 explicitly teaching the amorphous oxide film contains hafnium. Applicant argues a composition of a target mix, however the claims do not necessarily exclude a target mix. Again, the claims are interpreted as comprising and does not exclude other elements so long as the prior art teaches amorphous hafnium oxide as indicated above.

As previously set forth, the density requirement is an obvious difference as sputtering process effects the density. The process in Applicant's specification indicates no heating of a substrate and deposited under vacuum (see page 11, line 30-31 and page 12, lines 3-8), and the prior art does not heat a substrate (see Ando, page 9) and deposits by sputtering or vacuum (see Ando, Examples 14 and 17), therefore the density would be expected to be the same.

The rejection is maintained for reasons of record.

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Conclusion

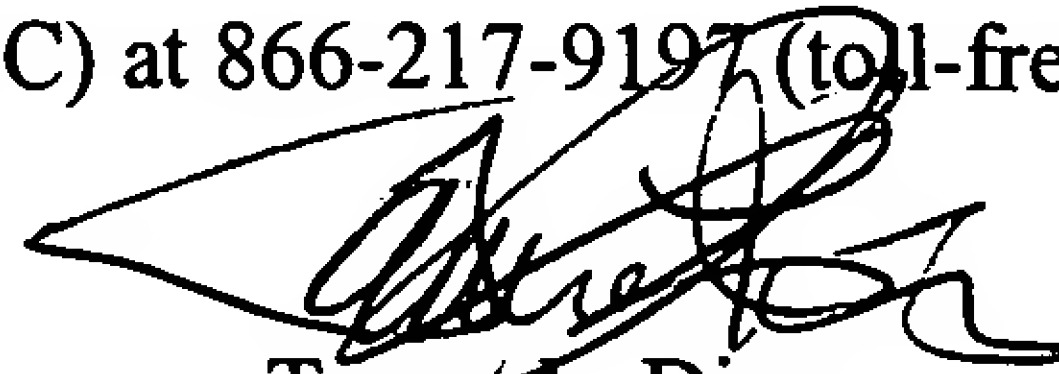
4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tamra L. Dicus
Examiner
Art Unit 1774

2/16/05



RENA DYE
SUPERVISORY PATENT EXAMINER
A.U. 1774 2/18/05